

Applicants: Edward J. Ciaccio et al.
Serial No.: 09/918,216
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REMARKS

Claims 1-33 are pending in the subject application and presented for reconsideration.

Rejection under 35 U.S.C. §102(e)

In the October 3, 2003 Office Action, claims 1-33 were rejected under 35 U.S.C. §102(e) as purportedly anticipated by U.S. Patent No. 6,236,883 to Ciaccio et al. (hereinafter "the '883 patent").

The Office Action states that the '883 patent teaches applicant's method of mapping a reentrant isthmus using ecg data as seen in the abstract. The Office Action also states that the techniques can be performed on coronary sinus rhythm data.

Applicant maintains that the present claims are patentably distinct from the '883 patent.

The '883 patent describes methods and systems for identifying and localizing reentrant circuits from electrogram features in a heart of a subject, using feature detection and localization (FDL) algorithms. As summarized in the '883 patent at col. 3, lines 4-10, the methodologies of the '883 patent are applied in one group of embodiments to locate functional lines of block in reentrant circuits by analyzing data obtained during sustained monomorphic ventricular tachycardia (i.e. abnormal heart rhythm in which the heart beats more rapidly than normal, which can be caused by a reentrant circuit). At times, in order to obtain suitable conditions for measurement, ventricular tachycardia is initiated by electrical stimulation.

In contrast, the present application is directed at improvements to the methodologies of the '883 patent which do not require

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occurrence of (induced or uninduced) ventricular tachycardia. Instead of deriving the location of reentrant circuits through analyzing data obtained during sustained monomorphic ventricular tachycardia, the claimed invention of the present application relates to methods for identifying and localizing a reentrant circuit isthmus in a heart of a subject during sinus rhythm. The method comprises (a) receiving electrogram signals from the heart during sinus rhythm via electrodes, (b) creating a map based on the received electrogram signals, (c) determining, based on the map, a location of the reentrant circuit isthmus in the heart, and (d) displaying the location of the reentrant circuit isthmus, according to claim 1 of the present application.

The present application also relates to a system for identifying and localizing a reentrant circuit isthmus in a heart of a subject during sinus rhythm. The system comprises (a) an interface for receiving electrogram signals from the heart during sinus rhythm via electrodes, (b) processing means for creating a map based on the received electrogram signals, and determining, based on the map, a location of the reentrant circuit isthmus in the heart, and (c) a display adapted to display the location of the reentrant circuit isthmus, according to claim 32 of the present application.

The '883 patent simply does not disclose or suggest methodologies and systems for identifying and localizing a reentrant circuit isthmus in a heart of a subject during sinus rhythm which do not require occurrence of sustained monomorphic ventricular tachycardia.

Accordingly, Applicant respectfully requests that the rejection under 35 U.S.C. §102(e) be withdrawn.

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In view of the remarks hereinabove, Applicants maintain that claims 1-33 are allowable over the cited art. Accordingly, Applicant earnestly solicits the allowance of this application.


If a telephone interview would be of assistance in advancing prosecution of the subject application, Applicants' undersigned attorneys invite the Examiner to telephone them at the telephone number provided below.

If a petition for an extension of time is required to make this response timely, this paper should be considered to be such a petition, and the Commissioner is authorized to charge the requisite fees to our Deposit Account No. 03-3125.

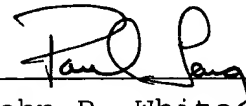
No fee is deemed necessary in connection with the filing of this response. However, if any additional fee is required, authorization is hereby given to charge the amount of any such fee to Deposit Account No. 03-3125.

Respectfully submitted,

I hereby certify that this correspondence is being deposited this date with the U.S. Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.


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December 31, 2003
Date


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